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REVISED CHECKLIST OF BATS (CHIROPTERA) OF MEXICO AND CENTRAL AMERICA

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Included herein is an annotated listing of bats from the republics of México, Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panamá, a geographic unit frequently referred to in accounts of individual species as Middle America. Continued interest in the chiropteran fauna of this broad region, most of which lies in the Neotropical Realm, suggested to us the need for an updated list of that fauna accompanied by appropriate brief remarks on the distribution and systematics of included species. Such a list should prove of considerable value to biologists, particularly those engaged in field-oriented studies.

Jones *et al.* (1977) compiled a similar list more than 10 years ago. That same year was used for termination of formal entries into Hall's (1981) compendium, *The Mammals of North America* (see for synonomies, keys, and distribution maps), although some information published subsequently was included in addenda at the end of the second volume of that work. Using these two sources as a beginning point, we have attempted to summarize through the end of 1987, with a few citations from early in 1988, the considerable literature relating to faunistics and systematics of Middle American bats published in the past decade. A few publications dated 1976 or earlier that aid in clarity of text also are cited. Although rarely mentioned specifically, the three recent bibliographic references to Mexican mammals by Ramírez-P. *et*

al. (1982, 1983, 1986) were regularly consulted. By necessity, we have taken minor liberties both in text and in the list of cited literature in standardizing some names of Latin American authors with respect to hyphens and terminal capitalized letters.

In the accounts that follow, families, subfamilies, and genera are arranged in generally accepted phylogenetic sequence. Species of polytypic genera are, however, entered alphabetically. Subgeneric headings are not employed, but subgeneric distinctions are mentioned in text. For each species, information on distribution and systematics applies only to Middle America, although indication is given of occurrence to the north or south of that region as well. Many Neotropical bats occur northward dendritically in the lowlands of eastern or western México, or both, occasionally reaching the United States, and we have assumed a general acquaintance with this situation on the part of the reader.

Several colleagues were kind enough to offer comments on a preliminary draft of this checklist, for which we are extremely grateful. In this regard, we especially acknowledge Alfred L. Gardner, Timothy J. McCarthy, Oscar J. Polaco, and Don E. Wilson. We also acknowledge Consejo Nacional Ciencia y Technología of México for support of Arroyo-Cabralles.

FAMILY EMBALLONURIDAE

Subfamily Emballonurinae

Rhynchonycteris naso (Wied, 1820)

Distribution.—Oaxaca, Veracruz, and southern part of Yucatán Peninsula southeastward into South America.

Systematics.—*R. naso* is regarded as a monotypic species.

Saccopteryx bilineata (Temminck, 1838)

Distribution.—Western (Jalisco) and eastern (Veracruz) México, excluding northernmost part of Yucatán Peninsula, southeastward into South America.

Systematics.—*S. bilineata* is regarded by some authorities as a monotypic species; others recognize *S. b. centralis* Thomas, 1904, as the race occurring in Middle America.

Saccopteryx leptura (Schreber, 1774)

Distribution.—Chiapas, Belize (McCarthy, 1987), and Guatemala (Dickerman *et al.*, 1981) southeastward in Pacific versant to Nicaragua and thence to South America.

Systematics.—*S. leptura* is a monotypic species.

Cormura brevirostris (Wagner, 1843)

Distribution.—Nicaragua southeastward into South America.

Systematics.—*C. brevirostris* is a monotypic species.

***Peropteryx kappleri* Peters, 1867**

Distribution.—Southern Veracruz, Tabasco, and Belize (Cartwright and Kirkpatrick, 1977) southeastward into South America.

Systematics.—*P. kappleri* is a monotypic species.

***Peropteryx macrotis* (Wagner, 1843)**

Distribution.—Southern Guerrero (Ramírez-P. et al., 1977; López-F., 1981), southern Veracruz, and Yucatán Peninsula southeastward into South America.

Systematics.—The nominate subspecies occurs throughout the Middle American range of the species.

***Centronycteris maximiliani* (Fischer, 1829)**

Distribution.—Veracruz southeastward, mostly in Caribbean versant (excluding Yucatán Peninsula), into South America.

Systematics.—*C. m. centralis* Thomas, 1912, is the subspecies in Middle America.

***Balantiopteryx io* Thomas, 1904**

Distribution.—Southeastern México (Oaxaca, Tabasco, Veracruz), Belize, and Guatemala.

Systematics.—*B. io* is a monotypic species.

***Balantiopteryx plicata* Peters, 1867**

Distribution.—Western (Sonora) and eastern (San Luis Potosí) México southeastward to western Costa Rica.

Systematics.—Two subspecies are recognized—*B. p. pallida* Burt, 1948, in southern Baja California, southern Sonora, and adjacent parts of Chihuahua and Sinaloa, and the nominate race throughout the remainder of the range of the species. It is of note that Cuervo D. et al. (1986) recently reported *B. plicata* from Colombia.

Subfamily Diclidurinae

***Cyttarops alecto* Thomas, 1913**

Distribution.—Eastern Nicaragua southeastward into South America.

Systematics.—*C. alecto* is a monotypic species.

***Diclidurus albus* Wied, 1820**

Distribution.—Western México (Nayarit) southeastward to Oaxaca and Veracruz, thence southeastward into South America.

Systematics.—The Middle American subspecies is *D. a. virgo* Thomas, 1903.

FAMILY NOCTILIONIDAE

Noctilio albiventris Desmarest, 1818

Distribution.—Chiapas (Polaco, 1987) and Guatemala (Dolan and Carter, 1979) southeastward into South America.

Systematics.—*N. a. minor* Osgood, 1910, is the Middle American subspecies.

Noctilio leporinus (Linnaeus, 1758)

Distribution.—Western México (Sinaloa) southeastward to Veracruz and thence to South America.

Systematics.—The subspecies in Middle America is *N. l. mastivus* (Vahl, 1797).

FAMILY MORMOOPIDAE

Pteronotus davyi Gray, 1838

Distribution.—Western (Sonora and Baja California Sur—Woloszyn and Woloszyn, 1982) and eastern (Nuevo León) México southeastward into South America.

Systematics.—Two subspecies are recognized in Middle America—*P. d. fulvus* (Thomas, 1892) throughout most of the range in the region, and the nominate race from Nicaragua into South America.

Pteronotus gymnonotus (Wagner, 1843)

Distribution.—Veracruz southeastward into South America.

Systematics.—This naked-backed bat is regarded as a monotypic species.

Pteronotus parnelli (Gray, 1843)

Distribution.—Western (Sonora) and eastern (Tamaulipas) México southeastward into South America.

Systematics.—Three subspecies currently are recognized as occurring on the Middle American mainland: *P. p. mexicanus* (Miller, 1902) in much of the Mexican range of the species, south to Oaxaca and Veracruz; *P. p. mesoamericanus* Smith, 1972, from the Isthmus of Tehuantepec to central Honduras and southeastward in the Pacific versant to Panamá; and *P. p. rubiginosus* (Wagner, 1843) in the Caribbean versant of Central America from Honduras into South America.

Pteronotus personatus (Wagner, 1843)

Distribution.—Western (southern Sonora) and eastern (southern Tamaulipas) México southeastward (excluding much of Yucatán Peninsula) into South America.

Systematics.—*P. p. psilotis* (Dobson, 1873) occupies the northern part of the Middle American range, southward to

Honduras, whereas the nominate subspecies ranges from Nicaragua into South America.

***Mormoops megalophylla* Peters, 1864**

Distribution.—Most of México, including southern Baja California, southward to El Salvador and Honduras; also occurs in southwesternmost United States.

Systematics.—The subspecies in Middle America is *M. m. megalophylla*.

FAMILY PHYLLOSTOMIDAE

Subfamily Phyllostominae

***Micronycteris brachyotis* (Dobson, 1879)**

Distribution.—Oaxaca and Veracruz (Medellín *et al.*, 1983) southeastward into South America.

Systematics.—*M. brachyotis* is a monotypic species and represents the subgenus *Lampronycteris*. The specific name *platyceps*, widely used for this bat for several years, is a synonym of *brachyotis*.

***Micronycteris daviesi* (Hill, 1964)**

Distribution.—Costa Rica and Panamá into South America.

Systematics.—*M. daviesi* is a monotypic species that represents the subgenus *Barticonycteris*, considered by some authors as a valid genus.

***Micronycteris hirsuta* (Peters, 1869)**

Distribution.—Southern Honduras southeastward into South America.

Systematics.—*M. hirsuta* is a monotypic species. Together with *megalotis*, *minuta*, and *schmidtorum*, this taxon represents the subgenus *Micronycteris*.

***Micronycteris megalotis* (Gray, 1842)**

Distribution.—Western (Jalisco and possibly Zacatecas—Matson *et al.*, 1978) and eastern (Tamaulipas) México southeastward into South America.

Systematics.—Two subspecies occur in Middle America, *M. m. mexicana* Miller, 1898 (México south to western Nicaragua and adjacent Costa Rica, and also on Isla del Maíz), and *M. m. microtis* Miller, 1898 (eastern Nicaragua southeastward to Panamá). Handley (1976) listed *microtis* as a species distinct from *megalotis*.

***Micronycteris minuta* (Gervais, 1856)**

Distribution.—Nicaragua southeastward into South America.

Systematics.—*M. minuta* is a monotypic species.

Micronycteris nicefori Sanborn, 1949

Distribution.—Belize (McCarthy and Blake, 1987) and southeastern Nicaragua, southeastward along Caribbean versant into South America.

Systematics.—*M. nicefori* is a monotypic species and the only representative of the subgenus *Trinycteris*.

Micronycteris schmidtorum Sanborn, 1935

Distribution.—Yucatán Peninsula (Jones *et al.*, 1973; McCarthy, 1987) and Guatemala (Dickerman *et al.*, 1981) southeastward into South America.

Systematics.—*M. schmidtorum* is a monotypic species.

Micronycteris sylvestris (Thomas, 1896)

Distribution.—Western (Nayarit) and eastern (Veracruz) México southeastward into South America.

Systematics.—*M. sylvestris* is a monotypic species and is the only representative of the subgenus *Glyphonycteris* (regarded as a distinct genus by Handley, 1976).

Macrotus californicus Baird, 1858

Distribution.—Northwestern México (Baja California, Chihuahua, Sonora, and northern Sinaloa) northward into United States.

Systematics.—*M. californicus* is a monotypic species. Populations of *Macrotus* in Tamaulipas and San Luis Potosí, considered by Anderson and Nelson (1965) to be morphologically indistinguishable from *californicus*, are presently of uncertain affinity, although Ramírez-P. *et al.* (1982) and Honacki *et al.* (1982) assigned them to that species.

Macrotus waterhousii Gray, 1843

Distribution.—Western (Sonora) and eastern (Hidalgo) México southward to Yucatán Peninsula and Guatemala.

Systematics.—Two subspecies are recognized on the North American mainland, *M. w. bulleri* H. Allen, 1890 (western and central México, including the Tres Marías islands), and *M. w. mexicanus* Saussure, 1860 (southern México and adjacent Guatemala).

Lonchorhina aurita Tomes, 1863

Distribution.—Oaxaca, Tabasco, and Quintana Roo southeastward into South America.

Systematics.—*L. aurita* probably is a polytypic species, and is in need of systematic review.

***Macrophyllum macrophyllum* (Schinz, 1821)**

Distribution.—Southern México, including Chiapas (Medellín *et al.*, 1986) and Tabasco, southeastward into South America.

Systematics.—*M. macrophyllum* is a monotypic species.

***Tonatia bidens* (Spix, 1823)**

Distribution.—Chiapas (Medellín, 1983) and Belize (McCarthy, 1987) southeastward into South America.

Systematics.—*T. b. bidens* is the only Recent subspecies of this bat (*T. b. saurophila* Koopman and Williams, 1951, is known only as a fossil from Jamaica).

***Tonatia brasiliense* (Peters, 1866)**

Distribution.—Southern México, including Veracruz and Quintana Roo (Sánchez-H. *et al.*, 1986), southeastward into South America.

Systematics.—The Middle American subspecies is *T. b. minuta* Goodwin, 1942, which is considered by some authors to be a distinct species (*nicaraguae* Goodwin, 1942, is a synonym). We follow Genoways and Williams (1984) in the spelling of *brasiliense*, and in regarding *minuta* as not specifically distinct from that species.

***Tonatia evotis* Davis and Carter, 1978**

Distribution.—Southern Veracruz, Tabasco, and southern Yucatán Peninsula southeastward to northern Honduras.

Systematics.—*T. evotis* is a monotypic species.

***Tonatia silvicola* (D'Orbigny, 1836)**

Distribution.—Honduras southeastward into South America.

Systematics.—Two subspecies occur in Central America, *T. s. centralis* Davis and Carter, 1978, in Honduras, Nicaragua, and Costa Rica, and the nominate race in Panamá.

***Mimon cozumelae* Goldman, 1914**

Distribution.—Oaxaca, Veracruz, and Yucatán Peninsula southeastward along Caribbean versant into South America.

Systematics.—*M. cozumelae* is a monotypic species, but may be conspecific with *M. bennettii* of South America, with which it comprises the subgenus *Mimon*.

***Mimon crenulatum* (É. Geoffroy St.-Hilaire, 1810)**

Distribution.—Chiapas (Medellín, 1983) and southern Yucatán Peninsula southeastward into South America.

Systematics.—The Middle American subspecies is *M. c. keenani* Handley, 1960. This species represents the subgenus *Anthorhina*.

***Phyllostomus discolor* Wagner, 1843**

Distribution.—Oaxaca and Veracruz southeastward into South America.

Systematics.—*P. d. verrucosus* Elliot, 1905, is the subspecies occurring in Middle America. However, Power and Tamsitt (1973) suggested that this species may be monotypic.

***Phyllostomus hastatus* (Pallas, 1767)**

Distribution.—Honduras southeastward into South America.

Systematics.—The one Middle American subspecies is *P. h. panamensis* J. A. Allen, 1904.

***Phylloderma stenops* Peters, 1865**

Distribution.—Known in Middle America from Chiapas, Belize (McCarthy, 1987), and Guatemala (McCarthy, 1982) southeastward into South America.

Systematics.—Two subspecies are recognized (Handley, 1966), *P. s. septentrionalis* Goodwin, 1940 (Chiapas to Honduras), and the nominate race from Costa Rica and Panamá into South America.

***Trachops cirrhosus* (Spix, 1823)**

Distribution.—Southern México (Oaxaca, Veracruz, Campeche, Quintana Roo—Wolfgang and Polaco, 1985) southeastward into South America.

Systematics.—Two subspecies are known from Middle America, *T. c. coffini* Goldman, 1925 (México to Nicaragua), and *T. c. cirrhosus* (Costa Rica southeastward).

***Chrotopterus auritus* (Peters, 1856)**

Distribution.—Southern México, including Oaxaca, Veracruz, Tabasco (Ramírez-P. et al., 1982), and Yucatán Peninsula, southeastward into South America.

Systematics.—Only the nominate subspecies occurs in Middle America.

***Vampyrum spectrum* (Linnaeus, 1758)**

Distribution.—Veracruz and Belize (McCarthy and Blake, 1987) southeastward into South America.

Systematics.—According to Husson (1962) and Handley (1966), *V. spectrum* is a monotypic species. Some recent authors, however, have continued to recognize *V. s. nelsoni* Goldman, 1917, as occurring from Colombia northwestward into México.

Subfamily *Glossophaginae****Glossophaga commissarisi*** Gardner, 1962

Distribution.—Western (Sinaloa to Colima) and southern (Veracruz and Oaxaca) México southeastward to South America.

Systematics.—*G. commissarisi* is represented in Middle America by two geographically disjunct subspecies, *G. c. hespera* Webster and Jones, 1982, in western México, and the nominate subspecies from southern México and Belize (McCarthy, 1987) to South America.

Glossophaga leachii (Gray, 1844)

Distribution.—Western México (Colima and adjacent Jalisco) southeastward to Costa Rica.

Systematics.—*G. leachii* is a monotypic species, *alticola* Davis, 1944, being a synonym (see Webster and Jones, 1980).

Glossophaga morenoi Martínez and Villa-R., 1938

Distribution.—Central México (Tlaxcala southeastward to Chiapas).

Systematics.—Two subspecies are recognized, the nominate race from Michoacán, Morelos, and Tlaxcala to western Oaxaca, and *G. m. mexicana* Webster and Jones, 1980, from eastern Oaxaca and Chiapas. Gardner (1986) considered *G. morenoi* to be the correct name for this species because the selection of a neotype for it by Villa-R. (1964) has priority over the specific name *mexicana* as proposed by Webster and Jones (1980).

Glossophaga soricina (Pallas, 1766)

Distribution.—Western (Sonora) and eastern (Tamaulipas) México, including the Tres Marías islands, southeastward into South America.

Systematics.—Two subspecies of *G. soricina* occur in Middle America, *G. s. handleyi* Webster and Jones, 1980 (all mainland populations), and *G. s. mutica* Merriam, 1898 (Tres Marías islands).

Leptonycteris nivalis (Saussure, 1860)

Distribution.—Guatemala northward through much of México, barely reaching United States.

Systematics.—*L. nivalis* is regarded as a monotypic species.

Leptonycteris sanborni Hoffmeister, 1957

Distribution.—Western (Sonora and western Chihuahua) and eastern (Nuevo León) México southeastward into El Salvador; also in extreme southwestern United States.

Systematics.—*L. sanborni* is a monotypic species. Some recent authors (for example, Hall, 1981, and Polaco and Muñiz-

Martínez, 1987) have used the specific name *yerbabuenae* Martínez and Villa-R., 1940, for this bat (but see Watkins *et al.*, 1972). Resolution of this problem evidently will depend on designation of a valid neotype for *yerbabuenae*.

***Lonchophylla concava* Goldman, 1914**

Distribution.—Known from Costa Rica and Panamá eastward into South America.

Systematics.—*L. concava* is here listed as a monotypic species, although Handley (1966) regarded it as a subspecies of *L. mordax* Thomas, 1903.

***Lonchophylla robusta* Miller, 1912**

Distribution.—Nicaragua southeastward into South America.

Systematics.—*L. robusta* is a monotypic species.

***Lonchophylla thomasi* J. A. Allen, 1904**

Distribution.—Known in Middle America only from extreme eastern Panamá.

Systematics.—*L. thomasi* is a monotypic species.

***Lionycteris spurrelli* Thomas, 1913**

Distribution.—Known in Middle America only from eastern Panamá.

Systematics.—*L. spurrelli* is a monotypic species.

***Anoura cultrata* Handley, 1960**

Distribution.—Costa Rica and Panamá into South America.

Systematics.—*A. cultrata* is a monotypic species, and includes *A. werckleae* Starrett, 1969, as a synonym (Nagorsen and Tamsitt, 1981).

***Anoura geoffroyi* Gray, 1838**

Distribution.—Western (Sinaloa) and eastern (Tamaulipas) México southeastward into South America.

Systematics.—*A. g. lasiopyga* (Peters, 1868) is the Middle American subspecies.

***Lichonycteris obscura* Thomas, 1895**

Distribution.—Belize (Hill, 1985) and Guatemala southeastward into South America.

Systematics.—*L. obscura* is a monotypic species.

***Hylonycteris underwoodi* Thomas, 1903**

Distribution.—Western (Nayarit—Ramírez-P. and López-F., 1979, and Jalisco) and eastern (Veracruz) México southeastward to western Panamá.

Systematics.—Two subspecies are recognized, *H. u. minor* Phillips and Jones, 1971 (Nayarit to southern Oaxaca), and the nominate race (Veracruz and northern Oaxaca to Panamá).

Choeroniscus godmani (Thomas, 1903)

Distribution.—Western México (Sinaloa) southeastward into South America.

Systematics.—*C. godmani* is a monotypic species.

Choeronycteris mexicana Tschudi, 1844

Distribution.—Most of México (and adjacent southwestern United States) southeastward to Honduras.

Systematics.—*C. mexicana* is a monotypic species.

Musonycteris harrisoni Schaldach and McLaughlin, 1960

Distribution.—Known only from Jalisco (Sánchez-H., 1978; Webster *et al.*, 1982), Colima, Michoacán, and Guerrero in western México.

Systematics.—*M. harrisoni* is a monotypic species. Although Handley (1966) regarded *Musonycteris* as a synonym of *Choeronycteris*, we follow Phillips (1971) and Webster *et al.* (1982) in recognizing it as a distinct genus.

Subfamily Carollinae

Carollia brevicauda (Schinz, 1821)

Distribution.—Eastern México (San Luis Potosí, Veracruz) southeastward into South America.

Systematics.—*C. brevicauda* is a monotypic species.

Carollia castanea H. Allen, 1890

Distribution.—Honduras southeastward into South America.

Systematics.—*C. castanea* is a monotypic species.

Carollia perspicillata (Linnaeus, 1758)

Distribution.—Veracruz and Oaxaca southeastward into South America.

Systematics.—The Middle American subspecies is *C. p. azteca* Saussure, 1860.

Carollia subrufa (Hahn, 1905)

Distribution.—Western México (Jalisco and Colima) southeastward to Nicaragua.

Systematics.—*C. subrufa* is a monotypic species.

Subfamily Stenodermatinae

Sturnira lilium (É. Geoffroy St.-Hilaire, 1810)

Distribution.—Western (Sonora) and eastern (Tamaulipas, Hidalgo—Carter and Jones, 1978) México southeastward into South America.

Systematics.—The Middle American subspecies is *S. l. parvidens* Goldman, 1917.

***Sturnira ludovici* Anthony, 1924**

Distribution.—Western (Sinaloa, Durango) and eastern (Tamaulipas, Hidalgo—Carter and Jones, 1978) México southward into South America.

Systematics.—Two subspecies presently are recognized in Middle America, *S. l. occidentalis* Jones and Phillips, 1964 (Sinaloa to Jalisco), and the nominate race (eastern and central México into South America).

***Sturnira luisi* Davis, 1980**

Distribution.—Costa Rica and probably Panamá, thence into South America.

Systematics.—*S. luisi* is a monotypic species.

***Sturnira mordax* (Goodwin, 1938)**

Distribution.—Known only from Costa Rica; probably also occurs in western Panamá.

Systematics.—*S. mordax* is a monotypic species described originally as the sole representative of the genus *Sturnirops*, which Owen (1987) found indistinguishable from *Sturnira* even at the subgeneric level.

***Vampyressa macconnelli* (Thomas, 1901)**

Distribution.—Costa Rica and Panamá into South America.

Systematics.—*V. macconnelli* is regarded as monotypic. This species was named originally as the sole representative of the genus *Mesophylla*, and has been referred by some authors to *Ectophylla*, but was placed by Owen (1987) in the genus *Vampyressa*. Owen also stated that presently accepted subgenera in *Vampyressa* may not be recognized, and that the genus as currently understood may not be monophyletic.

***Vampyressa nymphaea* Thomas, 1909**

Distribution.—Nicaragua southeastward into South America.

Systematics.—*V. nymphaea* is a monotypic species regarded by Davis (1975) as belonging to the subgenus *Vampyriscus* (see also the comment under *V. macconnelli*).

***Vampyressa pusilla* (Wagner, 1843)**

Distribution.—Southern México (Oaxaca, Veracruz) southeastward into South America.

Systematics.—The Middle American subspecies is *V. p. thyone* (Thomas, 1909). The species belongs to the nominate subgenus as currently understood (see also the comment under *V. macconnelli*).

***Uroderma bilobatum* Peters, 1866**

Distribution.—Oaxaca, Veracruz, and Quintana Roo (Sánchez-H. et al., 1986) southeastward into South America.

Systematics.—Three subspecies are represented in Middle America: *U. b. molaris* Davis, 1968 (Caribbean versant from Veracruz to western Panamá); *U. b. davisii* Baker and McDaniel, 1972 (Pacific versant from Oaxaca to El Salvador and Honduras); and *U. b. convexum* Lyon, 1902 (Pacific versant of Nicaragua and Costa Rica southeastward into South America).

***Uroderma magnirostrum* Davis, 1968**

Distribution.—Pacific versant from southwestern México (Michoacán—Polaco and Muñiz-Martínez, 1987) southeastward into South America.

Systematics.—*U. magnirostrum* is a monotypic species.

***Artibeus hirsutus* Andersen, 1906**

Distribution.—Western México from Sonora southward to Morelos and Guerrero.

Systematics.—*A. hirsutus* is a monotypic species.

***Artibeus inopinatus* Davis and Carter, 1964**

Distribution.—Known only from El Salvador, Honduras, and Nicaragua.

Systematics.—*A. inopinatus* is a monotypic species.

***Artibeus intermedius* J. A. Allen, 1897**

Distribution.—Western (Sinaloa) and eastern (Tamaulipas) México southeastward (mainly in the Pacific versant) into South America.

Systematics.—*A. intermedius*, a monotypic species, long was regarded as a subspecies of *A. lituratus* until Davis (1984) restored it to specific status. The distribution of this bat is not well known, because most authors have not distinguished between specimens of *intermedius* and *lituratus*, which evidently are sympatric in some areas.

***Artibeus jamaicensis* Leach, 1821**

Distribution.—Western (Sinaloa) and eastern (Tamaulipas) México southeastward into South America.

Systematics.—Middle American subspecies are as follows (Davis, 1970): *A. j. triomylus* Handley, 1966 (western México from Sinaloa to Oaxaca); *A. j. yucatanicus* J. A. Allen, 1904 (eastern México and the Yucatán Peninsula); *A. j. paulus* Davis, 1970 (Pacific versant of Middle America from Chiapas to Costa Rica); *A. j. richardsoni* J. A. Allen, 1908 (Caribbean versant from Chiapas southeastward to Panamá and into South America).

***Artibeus lituratus* (Olfers, 1818)**

Distribution.—Isthmus of Tehuantepec southeastward (mainly in Caribbean versant) into South America; possibly occurs in diminished numbers northward into western (Nayarit) and eastern (Tamaulipas) México (Davis, 1984).

Systematics.—The Middle American subspecies is *A. l. palmarum* J. A. Allen and Chapman, 1897. Also see comment under *A. intermedius*.

***Ectophylla alba* H. Allen, 1892**

Distribution.—Caribbean versant of Honduras (Benshoof *et al.*, 1984), Nicaragua, Costa Rica, and western Panamá to Colombia (Cuervo D. *et al.*, 1986).

Systematics.—*E. alba* is a monotypic species.

***Vampyrops dorsalis* Thomas, 1900**

Distribution.—Panamá into South America.

Systematics.—This species is in need of systematic review. Panamanian and Colombian specimens may include a second species distinct from *dorsalis*.

***Vampyrops helleri* Peters, 1866**

Distribution.—Oaxaca and Veracruz southeastward into South America.

Systematics.—This species currently is regarded as monotypic pending additional systematic study.

***Vampyrops vittatus* (Peters, 1860)**

Distribution.—Costa Rica into South America.

Systematics.—*V. vittatus* is a monotypic species.

***Vampyrodes caraccioli* (Thomas, 1889)**

Distribution.—Caribbean versant of Oaxaca and southern Veracruz southeastward into South America.

Systematics.—The Middle American subspecies is *V. c. major* G. M. Allen, 1908.

***Chiropoda salvini* Dobson, 1878**

Distribution.—Western (Sinaloa, Chihuahua) and eastern (Hidalgo—Alvarez and Polaco, 1980) México southeastward (except Yucatán Peninsula) into South America.

Systematics.—Two subspecies are recognized, *C. s. scopaeum* Handley, 1966 (Pacific versant from Chihuahua and Sinaloa to Costa Rica), and the nominate race (Caribbean versant from Hidalgo and Veracruz to Costa Rica, and thence into South America).

***Chiropoda trinitatum* Goodwin, 1958**

Distribution.—Known in Middle America only from Panamá.

Systematics.—*C. t. gorgasi* Handley, 1960, is the Panamanian subspecies.

***Chiroderma villosum* Peters, 1860**

Distribution.—Eastern México (Hidalgo—Carter and Jones, 1978) southeastward into South America.

Systematics.—The Middle American subspecies is *C. v. jesupi* J. A. Allen, 1900.

***Dermanura azteca* (Andersen, 1906)**

Distribution.—Disjunct populations at moderate to relatively high elevations in northern and central México (Sinaloa and Tamaulipas southward to Oaxaca), Guatemala and adjacent parts of Chiapas and Honduras, and Costa Rica and western Panamá.

Systematics.—Three subspecies are recognized, corresponding to the three distributional regions listed above—*D. a. azteca*, *D. a. minor* (Davis, 1969), and *D. a. major* (Davis, 1969), respectively. Species of the genus *Dermanura* were considered generically distinct from *Artibeus* and removed from that genus by Owen (1987), who also listed appropriate binomial and trinomial nomenclature for the species of the genus.

***Dermanura hartii* (Thomas, 1892)**

Distribution.—Western (Jalisco) and eastern (Tamaulipas) México southeastward into South America.

Systematics.—*D. hartii* currently is regarded as a monotypic species. Following Anderson *et al.* (1982) and others, who placed this species in the genus *Artibeus* (*sensu lato*), Owen (1987) reluctantly retained *hartii* in *Dermanura*. However, it probably is deserving of generic status under the name *Enchisthenes*.

***Dermanura phaeotis* Miller, 1902**

Distribution.—Western (Sinaloa) and eastern (Veracruz) México southeastward into South America.

Systematics.—Middle American subspecies include: *D. p. nana* (Andersen, 1906) (western México from Sinaloa to Oaxaca); *D. p. palatina* (Davis, 1970) (Pacific versant from Chiapas to Costa Rica); and the nominate race (Caribbean versant from Veracruz to Panamá), intergrading with *D. p. ravus* Miller, 1902, in eastern Panamá (Handley, 1987). Also see comment under *D. azteca*.

***Dermanura tolteca* (Saussure, 1860)**

Distribution.—Western (Sinaloa, Durango) and eastern (Nuevo León, Tamaulipas) México southeastward at low and moderate elevations to Panamá and probably adjacent South America.

Systematics.—Recognized subspecies include *D. t. hespera* (Davis, 1969) in the Pacific versant from Sinaloa to Nicaragua,

and the nominate race (eastern México southeastward to Panamá). Also see comment under *D. azteca*.

***Dermanura watsoni* (Thomas, 1901)**

Distribution.—Veracruz and Oaxaca southeastward into South America.

Systematics.—*D. watsoni* is a monotypic species. Koopman (1978) regarded *watsoni* as a subspecies of *D. cinerea* (as *Artibeus cinereus*), but Handley (1987) and Owen (1987) indicated that *watsoni* is specifically distinct. See also comment under *D. azteca*.

***Centurio senex* Gray, 1842**

Distribution.—Western (Sinaloa) and eastern (Tamaulipas) México southeastward into South America.

Systematics.—The nominate subspecies occurs in Middle America.

Subfamily Desmodontinae

***Desmodus rotundus* (É. Geoffroy St.-Hilaire, 1810)**

Distribution.—Western (Chihuahua, Sonora) and eastern (Nuevo León, Tamaulipas) México southeastward into South America.

Systematics.—The Middle American subspecies is *D. r. murinus* Wagner, 1840.

***Diaemus youngii* Jentink, 1893**

Distribution.—Eastern México (Tamaulipas) southeastward into South America.

Systematics.—*D. youngii* is a monotypic species. Although Handley (1976), Koopman (1978), and Anderson *et al.* (1982) placed *youngii* in the genus *Desmodus*, none of these authors stated a reason for doing so.

***Diphylla ecaudata* Spix, 1823**

Distribution.—Eastern México and adjacent southern Texas southeastward into South America.

Systematics.—*D. ecaudata* currently is regarded as a monotypic species.

FAMILY NATALIDAE

***Natalus stramineus* Gray, 1838**

Distribution.—Western (Baja California, Chihuahua, Sonora) and eastern (Nuevo León, Tamaulipas) México southeastward into South America.

Systematics.—Two Middle American subspecies currently are recognized, *N. s. mexicanus* Miller, 1902 (Sonora southward to

Sinaloa and southwestern Zacatecas), and *N. s. saturatus* Dalquest and Hall, 1949 (remainder of continental distribution). *N. stramineus* is a member of the nominate subgenus.

FAMILY FURIPTERIDAE

Furipterus horrens (F. Cuvier, 1828)

Distribution.—Known from Costa Rica and Panamá eastward into South America.

Systematics.—*F. horrens* is a monotypic species.

FAMILY THYROPTERIDAE

Thyroptera discifera (Lichtenstein and Peters, 1855)

Distribution.—Known in Central America only from vicinity of Bluefields, Nicaragua; probably occurs elsewhere in Caribbean lowlands from Nicaragua southeastward.

Systematics.—The Nicaraguan population represents *T. d. abdita* Wilson, 1976, with type locality on the Escondido River, 50 mi. W (by river) Bluefields, actually the I. P. Plantation, 3 km. S and 13 km. E Rama.

Thyroptera tricolor Spix, 1823

Distribution.—Southern Veracruz southeastward into South America.

Systematics.—The Middle American subspecies is *T. t. albiventer* (Tomes, 1856).

FAMILY VESPERTILIONIDAE

Subfamily Vespertilioninae

Myotis albescens (É. Geoffroy St.-Hilaire, 1806)

Distribution.—Southern Veracruz, Tabasco, and Chiapas southeastward into South America.

Systematics.—*M. albescens* is a monotypic species. For subgeneric placement of American species of *Myotis*, see Findley (1972) and Bogan (1978).

Myotis auriculus Baker and Stains, 1955

Distribution.—Central México (Jalisco and Veracruz) northward into southwestern United States; also an isolated record from Guatemala (Hoffmann *et al.*, 1987).

Systematics.—Two subspecies are recognized, *M. a. auriculus* in Nuevo León, Tamaulipas, and Veracruz, and *M. a. apache* Hoffmeister and Krutzsch, 1955, from Jalisco northward in

western and central México. The one known specimen from Guatemala was not assigned to subspecies.

***Myotis californicus* (Audubon and Bachman, 1842)**

Distribution.—Guatemala northward throughout most of México into United States.

Systematics.—Three subspecies are recorded from the region: the nominate race, which occurs in northern and western México, including Baja California, south to Zacatecas (Matson and Baker, 1986); *M. c. mexicanus* (Saussure, 1860) from Tamaulipas, Durango (Bogan, 1975; Alvarez and Polaco, 1984), and southern Sinaloa southward to Chiapas and Guatemala (McCarthy and Bitar, 1983); and *M. c. stephensi* Dalquest, 1946, from the Colorado River Delta region of Baja California and Sonora. Schmidly and Hendricks (1984) referred specimens from the San Carlos Mountains of Tamaulipas to *M. c. californicus*, giving several reasons for its occurrence there.

***Myotis carteri* LaVal, 1973**

Distribution.—Known only from western México in Colima, Jalisco, Michoacán, and Nayarit (Bogan, 1978; Núñez G. et al., 1981; Polaco and Muñiz-Martínez, 1987).

Systematics.—Originally described (LaVal, 1973a) as a subspecies of *M. nigricans*, this bat was accorded specific status by Bogan (1978).

***Myotis ciliolabrum* Merriam, 1886**

Distribution.—Michoacán (Burt, 1961) and Zacatecas in western México and Nuevo León in east, northward into United States.

Systematics.—The subspecies in México is *M. c. melanorhinus* (Merriam, 1890). Hall (1981) employed the specific name *subulatus* for this bat (but see Glass and Baker, 1968); van Zyll de Jong (1984, 1985) separated the small-footed myotis into two (eastern and western) species, referring the western (and Mexican) populations to *M. ciliolabrum*.

***Myotis cobanensis* Goodwin, 1955**

Distribution.—Presently known only from Cobán, Guatemala.

Systematics.—Originally described as a subspecies of *M. velifer*, this bat was regarded as a distinct species by de la Torre (1958). It is known only from the holotype.

***Myotis elegans* Hall, 1962**

Distribution.—Lowlands of eastern México (San Luis Potosí) southeastward, excluding northern part of Yucatán Peninsula, to Costa Rica.

Systematics.—*M. elegans* is a monotypic species.

***Myotis evotis* (H. Allen, 1864)**

Distribution.—Widely distributed in temperate western North America, but known from México only from Comondú, Baja California Sur.

Systematics.—The inclusion of this species in the Middle American chiropteran fauna rests solely on the holotype of *Myotis micronyx* Nelson and Goldman, 1909, which currently is regarded as a synonym of *M. e. evotis*.

***Myotis findleyi* Bogan, 1978**

Distribution.—Known only from the Tres Marías islands, Nayarit.

Systematics.—Prior to the description of *M. findleyi*, specimens of *Myotis* from the Tres Marías islands were referred either to *M. californicus* or *M. nigricans*.

***Myotis fortidens* Miller and G. M. Allen, 1928**

Distribution.—Guatemala (Dolan and Carter 1979; Dickerman et al., 1981) and southern México (Chiapas, Oaxaca, Tabasco, Veracruz) northwestward along Pacific versant to Sonora.

Systematics.—Two subspecies are recognized, the nominate race from central Sinaloa southward, and *M. f. sonoriensis* Findley and Jones, 1967, in northern Sinaloa and Sonora.

***Myotis keaysi* J. A. Allen, 1914**

Distribution.—Eastern México (Tamaulipas) southeastward into South America.

Systematics.—The Middle American subspecies is *M. k. pilosatibialis* LaVal, 1973.

***Myotis lucifugus* (Le Conte, 1831)**

Distribution.—Central México (Estado de México, Distrito Federal) northward along eastern escarpment of Sierra Madre Occidental (Zacatecas—Urbano-V. et al., 1987) to Sonora; widely distributed to the north of México.

Systematics.—The one Mexican subspecies is *M. l. occultus* Hollister, 1909.

***Myotis milleri* Elliot, 1903**

Distribution.—Known only from Sierra San Pedro Mártir, Baja California Norte.

Systematics.—*M. milleri* is a monotypic species thought to be closely related to *M. evotis*.

***Myotis nigricans* (Schinz, 1821)**

Distribution.—Eastern (Tamaulipas) México southeastward (excluding Yucatán Peninsula) into South America.

Systematics.—Bogan (1978) recognized two subspecies in Middle America, the nominate race from Guatemala southeastward, and *M. n. extremus* Miller and G. M. Allen, 1928, from Chiapas and presumably regions to the north thereof.

***Myotis oxyotus* (Peters, 1867)**

Distribution.—Recorded in Middle America only from highlands of Costa Rica and western Panamá; also occurs in South America.

Systematics.—The Middle American subspecies is *M. o. gardneri* LaVal, 1973.

***Myotis peninsularis* Miller, 1898**

Distribution.—Southern Baja California Sur.

Systematics.—*M. peninsularis* is a monotypic species related to *M. velifer*.

***Myotis planiceps* Baker, 1955**

Distribution.—Known from three localities in boreal forest in states of Coahuila, Nuevo León, and Zacatecas (Matson, 1975).

Systematics.—*M. planiceps* is a monotypic species.

***Myotis riparius* Handley, 1960**

Distribution.—Honduras southeastward into South America.

Systematics.—*M. riparius* is a monotypic species. According to LaVal (1973a), the specific name *guaycuru* Proença, 1943, may be the oldest name for this taxon.

***Myotis thysanodes* Miller, 1897**

Distribution.—Chiapas and Oaxaca northward in highlands throughout much of México and into United States.

Systematics.—The two Mexican subspecies are the nominate race in the northern and central parts of the range, and *M. t. aztecus* Miller and G. M. Allen, 1928, from Veracruz and Estado de México southeastward.

***Myotis velifer* (J. A. Allen, 1890)**

Distribution.—Much of México, excluding Baja California and Yucatán Peninsula, southeastward to Honduras and El Salvador (Hellebuyck *et al.*, 1985); also northward into United States.

Systematics.—Two subspecies currently are recognized in Middle America, *M. v. incautus* (J. A. Allen, 1896) in north-central and northeastern México (Chihuahua and Durango to Tamaulipas), and the nominate race (*brevis* a synonym) in western and south-central México southeastward.

***Myotis vivesi* Menegaux, 1901**

Distribution.—Islands and coastal areas of Gulf of California in Sonora and Baja California; also along Pacific Coast of central Baja California.

Systematics.—This species is monotypic.

***Myotis volans* (H. Allen, 1866)**

Distribution.—Northwestern and north-central México northward into United States; a disjunct population also occurs in mountains of central México.

Systematics.—Three subspecies are recorded from México: the nominate race in peninsular Baja California; *M. v. amotus* Miller, 1914, in the Transvolcanic Belt from Jalisco to Veracruz, including the state of México (Ramírez-P. et al., 1980; Ceballos G. and Galindo L., 1984); and *M. v. interior* Miller, 1914, from extreme northern Baja California, Chihuahua, Coahuila, and Durango.

***Myotis yumanensis* (H. Allen, 1864)**

Distribution.—Central México (Hidalgo, México, Michoacán, Morelos) northward on the Plateau and in west (including Baja California) into United States.

Systematics.—Three races are on record from México: *M. y. lambi* Benson, 1947, which is known only from the vicinity of San Ignacio, Baja California Sur; *M. y. lutosus* Miller and G. M. Allen, 1928, in the southern part of the range on the Mexican Plateau, north to San Luis Potosí and Zacatecas and in the west to northern Sinaloa; and the nominate race in Chihuahua, Coahuila, Durango, Sonora, Zacatecas (Matson and Baker, 1986), and most of peninsular Baja California.

***Lasionycteris noctivagans* (Le Conte, 1831)**

Distribution.—Widely distributed migratory species in temperate North America; occurs southward at least to Tamaulipas, where recorded from a single locality in the San Carlos Mountains (Yates et al., 1976).

Systematics.—*L. noctivagans* is a monotypic species.

***Pipistrellus hesperus* (H. Allen, 1864)**

Distribution.—Central and western México, south to Guerrero and Querétaro, and north into western United States.

Systematics.—The nominate subspecies occurs in western (including peninsular Baja California) México southeastward to Guerrero, Michoacán, and Morelos, whereas *P. h. maximus* Hatfield, 1936, ranges from Hidalgo and Querétaro northward to Chihuahua and Coahuila.

***Pipistrellus subflavus* (F. Cuvier, 1832)**

Distribution.—Eastern United States southward through eastern Coahuila and Tamaulipas to Honduras.

Systematics.—Three subspecies are on record from Middle America: *P. s. clarus* Baker, 1954 (Coahuila), the nominate race (Tamaulipas), and *P. s. veraecrucis* (Ward, 1891) from Veracruz to Honduras.

***Eptesicus brasiliensis* (Desmarest, 1819)**

Distribution.—Highlands from Veracruz southeastward into South America.

Systematics.—The Middle American subspecies is *E. b. andinus* J. A. Allen, 1914. We follow Koopman (1978) in listing *andinus* as a subspecies of *brasiliensis*.

***Eptesicus furinalis* (D'Orbigny, 1847)**

Distribution.—Western (Jalisco) and eastern (San Luis Potosí and Tamaulipas—Hollander and Jones, 1988) México southeastward into South America.

Systematics.—Two subspecies are known from Middle America, *E. f. carteri* Davis, 1965, from the Caribbean lowlands of western Panamá northwestward in eastern Costa Rica and Nicaragua perhaps as far as eastern Honduras (Dolan and Carter, 1979), and *E. f. gaumeri* (J. A. Allen, 1897) throughout the remainder of the range in the region.

***Eptesicus fuscus* (Palisot de Beauvois, 1796)**

Distribution.—Most of México, southeastward at higher elevations into South America and northward into United States.

Systematics.—Four subspecies currently are recorded as occurring in Middle America: the nominate race in Nuevo León and presumably adjunct parts of Coahuila and Tamaulipas; *E. f. miradorensis* (H. Allen, 1866) in Sinaloa, Durango, probably central Coahuila (Wilson *et al.*, 1985), and central Tamaulipas (Schmidly and Hendricks, 1984) southeastward into South America; *E. f. pallidus* Young, 1908, in Baja California Norte, Chihuahua, northern Coahuila, and Sonora; and *E. f. peninsulae* (Thomas, 1898) in Baja California Sur. Several authors (Alvarez and Polaco, 1984; Wilson *et al.*, 1985) have pointed out the lack of clear-cut distinctions in northern México between *miradorensis* and adjacent races.

***Lasiurus blossevillii* (Lesson and Garnot, 1826)**

Distribution.—Western (Baja California, Sonora) and eastern (Nuevo León, Tamaulipas) México southeastward (excluding

much of Mexican Plateau) into South America; also occurs in western United States.

Systematics.—Two subspecies are found in Middle America (see Baker *et al.*, 1988), *L. b. teliotis* (H. Allen, 1891) in México southward to the Isthmus of Tehuantepec and the Yucatán Peninsula, and *L. b. frantzii* (Peters, 1871) from the Isthmus southeastward into South America. Geographic variation in this species is in need of systematic review (McCarthy, 1987).

***Lasiurus borealis* (Müller, 1776)**

Distribution.—Northern parts of Chihuahua, Coahuila, presumably Nuevo León, and Tamaulipas northward into United States.

Systematics.—*L. borealis* is a monotypic species (Baker *et al.*, 1988).

***Lasiurus castaneus* Handley, 1960**

Distribution.—Known only from Costa Rica (Dinerstein, 1985) and Panamá into South America (Cuervo D. *et al.*, 1986).

Systematics.—*L. castaneus* is a monotypic species.

***Lasiurus cinereus* (Palisot de Beauvois, 1796)**

Distribution.—Widely distributed in North America south at least to Guatemala; a migratory species that evidently occurs in Middle America only in colder parts of year.

Systematics.—The North American subspecies is *L. c. cinereus*. Disjunct races occur also in South America and on the Hawaiian islands.

***Lasiurus ega* (Gervais, 1856)**

Distribution.—Eastern (Tamaulipas) México and adjacent Texas southeastward (to Guerrero and including the Yucatán Peninsula) into South America.

Systematics.—The Middle American subspecies is *L. e. panamensis* (Thomas, 1901) according to Baker *et al.* (1988), but intraspecific variation in this bat is in need of critical study.

***Lasiurus egregius* (Peters, 1870)**

Distribution.—Known in Middle America only by a single specimen from extreme eastern Panamá.

Systematics.—*L. egregius* is a monotypic species.

***Lasiurus intermedius* H. Allen, 1862**

Distribution.—Western (Sinaloa) and eastern (Nuevo León, Tamaulipas) México southeastward to Honduras and El Salvador (Hellebuyck *et al.*, 1985); also occurs in southeastern United States.

Systematics.—The nominate subspecies occurs in Middle America.

***Lasiurus seminolus* (Rhoads, 1895)**

Distribution.—Reported from Tecolutla, Veracruz, by Villa-R. (1967) on basis of badly decomposed specimen he did not examine personally; occurs in southeastern United States south to extralimital record at Brownsville, Texas; possibly in extreme northeastern México.

Systematics.—*L. seminolus* is a monotypic species.

***Lasiurus xanthinus* (Thomas, 1897)**

Distribution.—Northwestern (Baja California, Sonora) México and Mexican Plateau (southern limits of range poorly known); also in adjacent southwestern United States.

Systematics.—As currently understood (Baker *et al.*, 1988), *L. xanthinus* is a monotypic species.

***Nycticeius humeralis* (Rafinesque, 1818)**

Distribution.—Known from northeastern México (Coahuila, Nuevo León, Tamaulipas, Veracruz), northeastward into United States.

Systematics.—Mexican specimens traditionally have been assigned to the subspecies *N. h. mexicanus* Davis, 1944. Schmidly and Hendricks (1984), however, assigned specimens from the San Carlos Mountains, Tamaulipas, to the nominate race and questioned recognition of *mexicanus*.

***Rhogoessa alleni* Thomas, 1892**

Distribution.—Mountainous areas of central and southern México from Oaxaca northward to Querétaro (Baumgardner *et al.*, 1977) and Zacatecas.

Systematics.—*R. alleni* is a monotypic species representing the subgenus *Baeodon* (see LaVal, 1973b).

***Rhogoessa genowaysi* Baker, 1984**

Distribution.—Known only from two localities in Pacific lowlands of southern Chiapas (Baker, 1984).

Systematics.—*R. genowaysi* is sympatric with *R. tumida*, a species from which it differs chromosomally “in diploid number [42 as opposed to 30-34] as well as in placement of centromeres and size of biarmed elements. The similarity of diploid numbers between *R. genowaysi* and *R. parvula* [42 as opposed to 44], however, still raises the possibility that the two taxa may be conspecific” (Baker, 1984). This and all other following species are members of the nominate subgenus.

Rhogeessa gracilis Miller, 1897

Distribution.—Known only from Jalisco, Oaxaca, Puebla, and Zacatecas.

Systematics.—*R. gracilis* is a monotypic species.

Rhogeessa mira LaVal, 1973

Distribution.—Recorded only from the Mexican state of Michoacán.

Systematics.—*R. mira* is a monotypic species that was included by Baker *et al.* (1985) in the *tumida-parvula* complex.

Rhogeessa parvula H. Allen, 1866

Distribution.—Western México from central Sonora southeastward to the Isthmus of Tehuantepec, including the Tres Marías islands.

Systematics.—*R. parvula* is a monotypic species in which, in contrast to *R. tumida*, there is no reported intraspecific chromosomal variation (Bickham and Baker, 1977; Baker, 1984).

Rhogeessa tumida H. Allen, 1866

Distribution.—Eastern México (Tamaulipas to Chiapas, Oaxaca, Yucatán Peninsula) southeastward into South America.

Systematics.—Although currently regarded as a monotypic taxon, the morphological (LaVal, 1973b) and chromosomal (Bickham and Baker, 1977; Honeycutt *et al.*, 1980; Baker, 1984) variation in *R. tumida* in Middle America alone suggests the presence of several biological species (Baker *et al.*, 1985).

Eudermia maculatum (J. A. Allen, 1891)

Distribution.—Known in México by only four specimens—three from Durango (Gardner, 1965; Alvarez and Polaco, 1984) and one from Querétaro (Schmidly and Martin, 1973); also known from much of temperate western North America.

Systematics.—*E. maculatum* is a monotypic species.

Plecotus mexicanus (G. M. Allen, 1916)

Distribution.—Mountains of central México (Jalisco, Michoacán, Morelos, Puebla, Veracruz) northward in Sierra Madre Occidental to Chihuahua and Sonora, and northward in Sierra Madre Oriental to Coahuila (Wilson *et al.* 1985); also reported from Yucatán Peninsula.

Systematics.—*P. mexicanus* is a monotypic species that, along with other American *Plecotus*, represents the subgenus *Corynorhinus*.

Plecotus townsendii Cooper, 1837

Distribution.—Mountainous and plateau areas from Oaxaca northward into United States; also in northwestern México and on some islands in Gulf of California (Sánchez-H., 1986).

Systematics.—Two subspecies are known in México, *P. t. australis* (Handley, 1955) throughout most of the range, and *P. t. pallidescens* (Miller, 1897) in the northwest (northern Chihuahua, Sonora, and Gulf islands).

Idionycteris phyllotis (G. M. Allen, 1916)

Distribution.—Mexican Plateau and adjacent mountainous areas from Jalisco, México (Ceballos G. and Galindo L., 1984), and Puebla (Urbano-V. et al., 1987) northward into United States.

Systematics.—*I. phyllotis* is a monotypic species. We follow Williams et al. (1970) in regarding *Idionycteris* as distinct generically from *Plecotus*.

Subfamily Nyctophilinae

Antrozous pallidus (Le Conte, 1856)

Distribution.—Western and central México (north of Tranverse Volcanic Cordillera) from Jalisco to Hidalgo (Alvarez and Polaco, 1980) northward into United States.

Systematics.—Three subspecies were recognized as occurring in México by Martin and Schmidly (1982): *A. p. minor* Miller, 1902, in Baja California and northwestern Sonora; *A. p. packardi* Martin and Schmidly, 1982, along the western slope of the Sierra Madre Occidental from Jalisco and southwestern Zacatecas northward to southern Sonora; and the nominate race throughout the remainder of the range in México.

Bauerus dubiaquercus (Van Gelder, 1959)

Distribution.—Scattered distributional records from western México (Jalisco—Engstrom and Wilson, 1981, Nayarit, and Tres Marias islands) to southern Veracruz, Chiapas (Medellín et al., 1986), Belize (McCarthy and Blake, 1987), Honduras, and northern Costa Rica (Dinerstein, 1985).

Systematics.—*B. dubiaquercus* is monotypic according to Engstrom and Wilson (1981), who also confirmed generic rank for *Bauerus*.

FAMILY MOLOSSIDAE

Molossops greenhalli (Goodwin, 1958)

Distribution.—Western (Nayarit—Gardner, 1977) México southward into South America.

Systematics.—The Middle American subspecies is *M. g. mexicanus* Jones and Genoways, 1967.

***Molossops planirostris* (Peters, 1865)**

Distribution.—Central Panamá eastward into South America.

Systematics.—Only the nominate subspecies occurs in Middle America.

***Tadarida aurispinosa* (Peale, 1848)**

Distribution.—Western (southern Sonora) and eastern (southern Tamaulipas) México probably southeastward into South America, but unreported from much of Central America.

Systematics.—*T. aurispinosa* is a monotypic species. With all other New World *Tadarida* except *T. brasiliensis*, it is assignable to the subgenus *Nyctinomops*, regarded by Freeman (1981) as a distinct genus.

***Tadarida brasiliensis* (I. Geoffroy St.-Hilaire, 1824)**

Distribution.—Most of Middle America, save Yucatán Peninsula, southeastward into South America and northward into United States.

Systematics.—Three subspecies are thought to occur in the Middle American region as follows: the nominate race from Costa Rica and Panamá into South America; *T. b. intermedia* Shamel, 1931, from Chiapas, Guatemala, and adjacent areas to the east and south; and *T. b. mexicanus* (Saussure, 1860), which occurs from Oaxaca northward. We have not followed Legendre (1984) in employing the generic name *Rhizomops* for *T. brasiliensis*, although it may be recognizable at the subgeneric level.

***Tadarida femorosacca* (Merriam, 1889)**

Distribution.—Much of western México (south to Guerrero and including Baja California, thence northeastward to Nuevo León); also recorded from southwestern United States.

Systematics.—This species is monotypic.

***Tadarida laticaudata* (É. Geoffroy St.-Hilaire, 1805)**

Distribution.—Eastern (southern Tamaulipas), central, and western (Jalisco—Sánchez-H., 1978) México southeastward into South America.

Systematics.—Two subspecies occur in Middle America, *T. l. ferruginea* Goodwin, 1954, from Tamaulipas to Jalisco, Guerrero, and Oaxaca, and *T. l. yucatanica* (Miller, 1902) from Chiapas and the Yucatán Peninsula southeastward.

***Tadarida macrotis* (Gray, 1939)**

Distribution.—Northern México southward to Guerrero and Veracruz; also known from parts of western and central United States.

Systematics.—*T. macrotis*, largest New World species of the genus, is monotypic.

***Eumops auripendulus* (Shaw, 1800)**

Distribution.—Oaxaca, Tabasco, and Yucatán Peninsula southeastward into South America.

Systematics.—The nominate subspecies occurs in Middle America.

***Eumops bonariensis* (Peters, 1874)**

Distribution.—Veracruz southeastward into South America.

Systematics.—The Middle American subspecies is *E. b. nanus* (Miller, 1900), which has been regarded by some investigators as distinct at the specific level from *bonariensis*.

***Eumops glaucinus* (Wagner, 1843)**

Distribution.—Central México (Jalisco—Sánchez-H., 1978, Morelos—Eger, 1977) southeastward into South America.

Systematics.—The nominate subspecies occurs throughout the Middle American range of this mastiff bat.

***Eumops hansae* Sanborn, 1932**

Distribution.—Southern Costa Rica and Panamá into South America.

Systematics.—*E. hansae* is a monotypic species.

***Eumops perotis* (Schinz, 1821)**

Distribution.—Southwestern United States southward to central México (Sinaloa, Hidalgo—Alvarez and Polaco, 1980, Zacatecas); disjunct populations also in South America.

Systematics.—The North American subspecies is *E. p. californicus* (Merriam, 1890).

***Eumops underwoodi* Goodwin, 1940**

Distribution.—Western México (Sonora) southeastward to Tabasco and Belize (Eger, 1977), hence to Nicaragua (Dolan and Carter, 1979).

Systematics.—Two subspecies are known from Middle America, *E. u. sonoriensis* Benson, 1947, from southern Arizona and Sonora, and *E. u. underwoodi* throughout the remainder of the geographic range.

Promops centralis Thomas, 1915

Distribution.—Jalisco and Puebla (Urbano-V. et al., 1987) southward to Oaxaca and Yucatán Peninsula, hence southeastward into South America.

Systematics.—The nominate subspecies occurs in Middle America.

Molossus ater É. Geoffroy St.-Hilaire, 1805

Distribution.—Western (Sinaloa) and eastern (Coahuila—Ramírez-P. and López-F., 1979, Tamaulipas) México southeastward into South America.

Systematics.—The Middle American subspecies is *M. a. nigricans* Miller, 1902.

Molossus bondae J. A. Allen, 1904

Distribution.—Honduras (Dolan and Carter, 1979) southeastward into South America; known also on basis of specimen from Quintana Roo (Alvarez and Ramírez-P., 1972).

Systematics.—*M. bondae* is a monotypic species.

Molossus molossus (Pallas, 1766)

Distribution.—Western (Sinaloa) and eastern (Coahuila—Ramírez-P. and López-F., 1979, Tamaulipas) México southeastward into South America.

Systematics.—This taxon as presently conceived, is in need of critical systematic study in that two or more species may be included under the single specific name *molossus*. Currently, three races are recorded from the North American mainland: *M. m. aztecus* (Saussure, 1860) throughout most of the Mexican range of the species southeastward to Costa Rica; *M. m. coibensis* J. A. Allen 1904, in Panamá; and *M. m. lambi* Gardner, 1966, in the coastal areas of Chiapas.

Molossus pretiosus Miller, 1902

Distribution.—Guerrero and Oaxaca southeastward into South America.

Systematics.—*M. pretiosus* probably is a monotypic species.

Molossus sinaloae J. A. Allen, 1906

Distribution.—Western México (Sinaloa) eastward and southward to Morelos and Yucatán Peninsula, hence to South America.

Systematics.—Two subspecies are recognized in Middle America—the nominate race throughout most of the range to northern Costa Rica, and *M. s. trinitatus* Goodwin, 1959, in southern Costa Rica and Panamá.

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